

ABSTRACT

A process for coloring vulcanized rubber granules that exhibits improved color durability is provided. Coloring is achieved by mixing low concentrations of aqueous based organic or inorganic pigment dispersions with rubber particles for a short time. Binding colorant onto the colored rubber particles is achieved when elastomer latex is added in a second step. The resulting colored vulcanized rubber particles exhibit outstanding color stability and color abrasion resistance. Optimum color adhesion onto rubber particles is achieved by use of elastomer tailored to the type of colorant used. With organic pigments such as copper phthalocyanine, excellent color abrasion resistance to vulcanized rubber particles results when elastomers such as SBR are used. With inorganic pigments such as iron oxide, excellent color abrasion resistance results when elastomers with very low glass transition temperature (T_g) such as acrylic rubber are used. The process can be readily scaled to large commercial blending equipment.